The Technologies That Empower Podcast Producer

Session 623

These are confidential sessions—please refrain from streaming, blogging, or taking pictures.

At the convention center, a movie will be placed here

The Technologies That Empower Podcast Producer

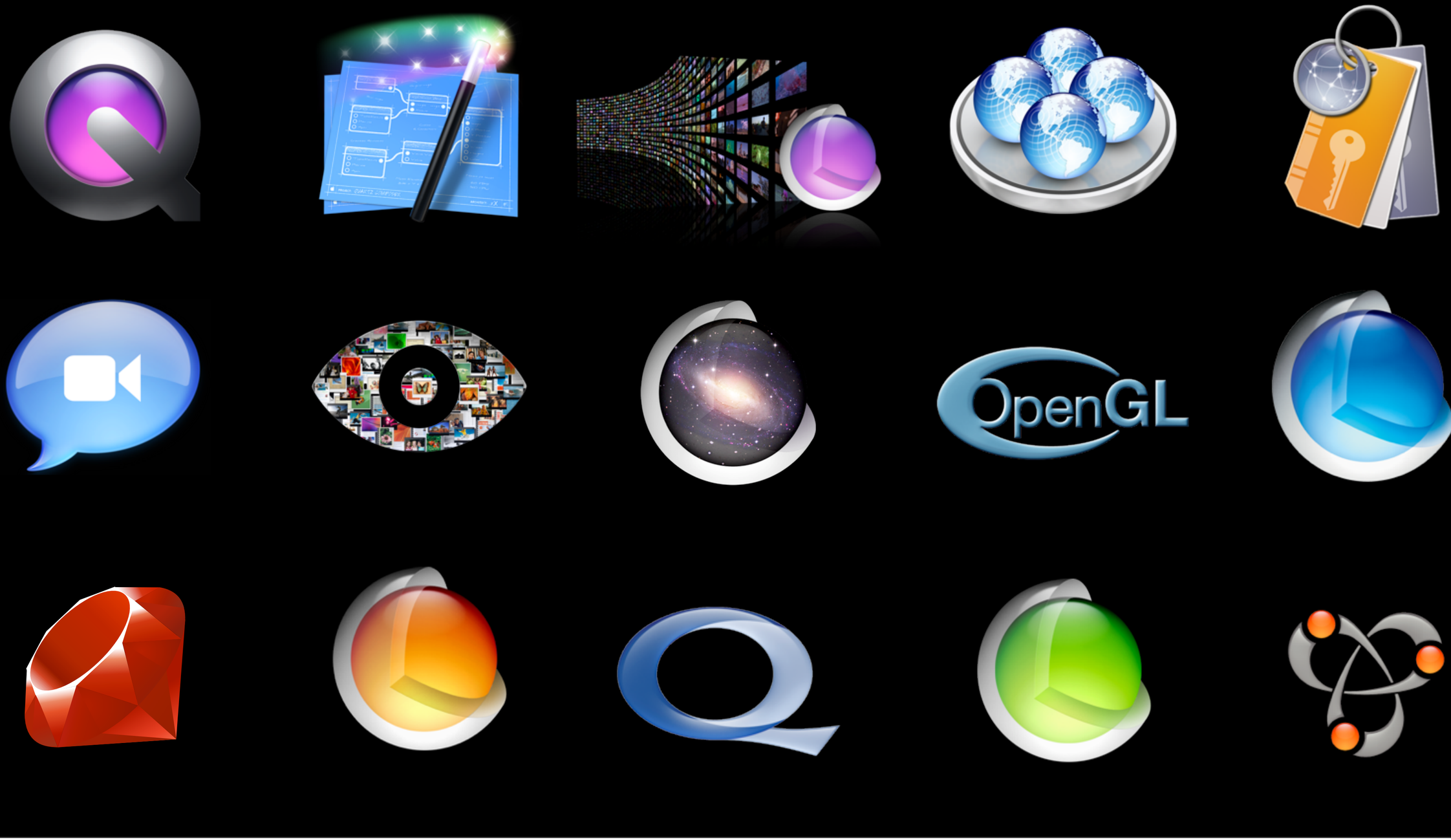
David Kramer
Technology Expert

Introduction

- “Podcast Producer leverages several industry-leading Snow Leopard technologies”

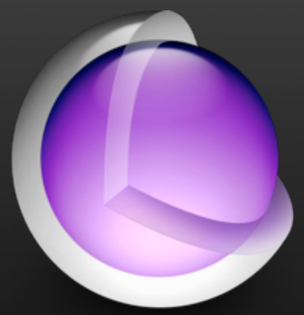
- Or…
  - Snow Leopard rocks!
  - To know Snow Leopard is to know Podcast Producer

Technology Framework



Technology Framework

Podcast Capture



Core Animation

QTKit Capture

Podcast Producer Server

Ruby on Rails

Xgrid

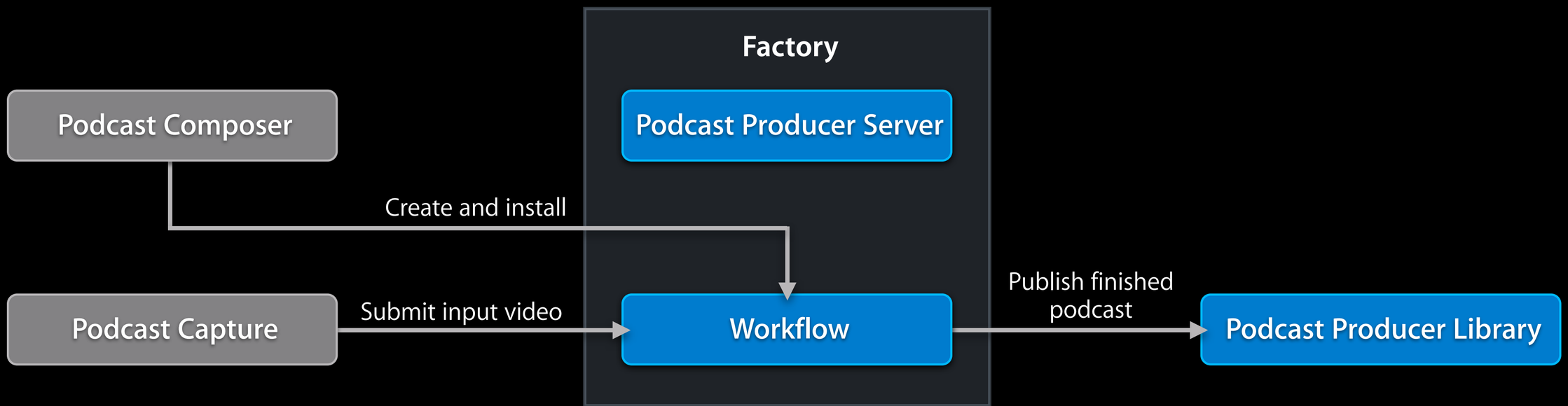
Podcast Producer Workflows

RubyCocoa

Quartz Composer

Like a Factory

- Mass production
  - Define the sequence of operations once
  - Use purpose-built components to repeatedly apply the sequence of operations to each raw input to produce finished goods



Mass Production vs. Craftwork

- I like homemade brownies
- Crafted podcasts might taste better
- Manufactured podcasts are definitely easier

What You'll Learn

- Leverage the same technologies
  - Not as convenient
  - Much more flexible
- Be more effective
  - Debug issues
  - Customize workflows

Podcast Producer

What's Podcast Producer?

Capture Process Deliver

Demo

Podcast Producer

Podcast Capture

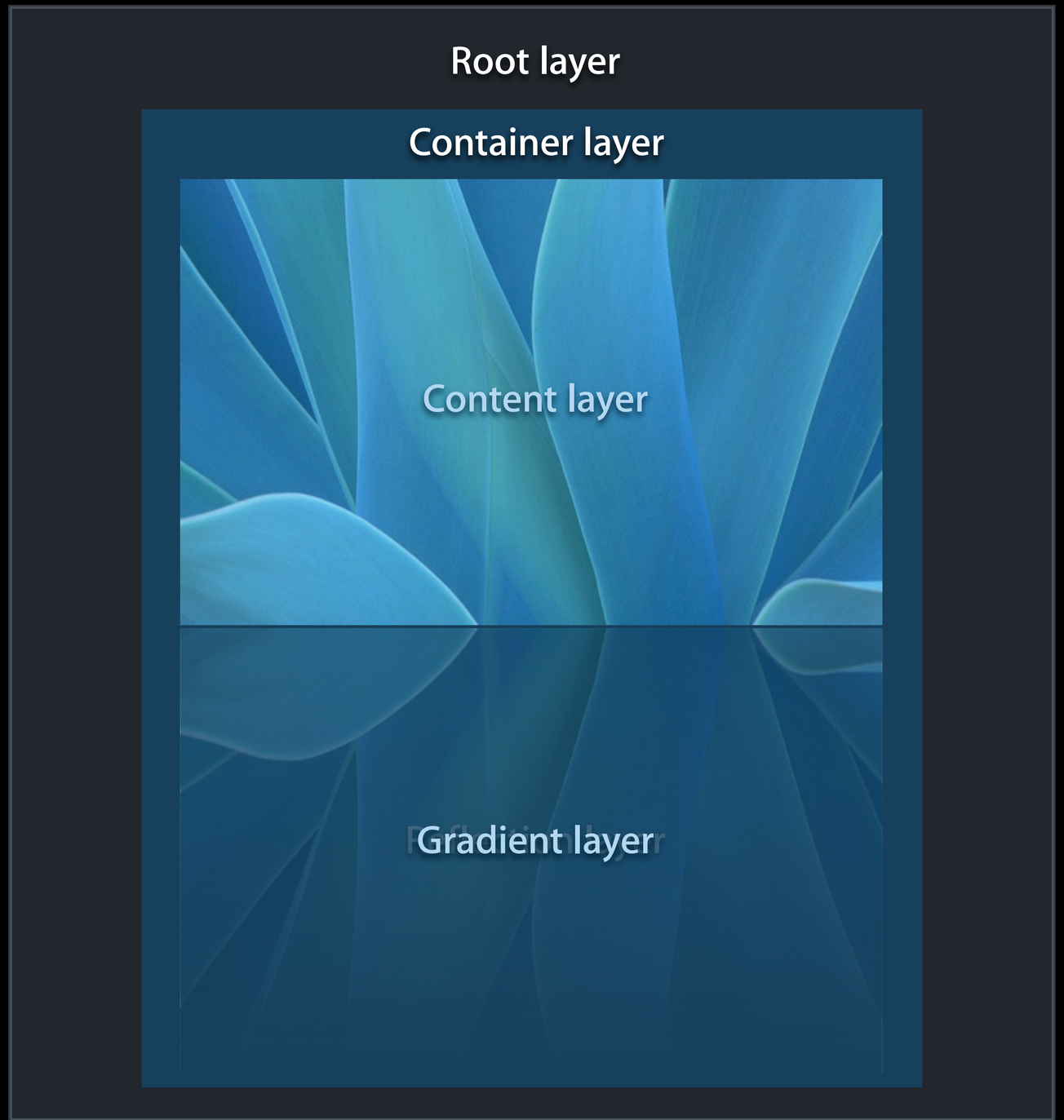
- Harnesses the command-line functionality into a simple interface
- The face of Podcast Producer
- Uses Core Animation to make a good impression on users

Podcast Capture

Nathan Spindel
Technology Expert

Core Animation

- Basic concepts
  - Layers
  - Animations
  - Transformations
  - Layout managers
- Use restraint
- Make it meaningful


Root layer
Container layer
Content layer
Gradient layer

Demo

Core Animation

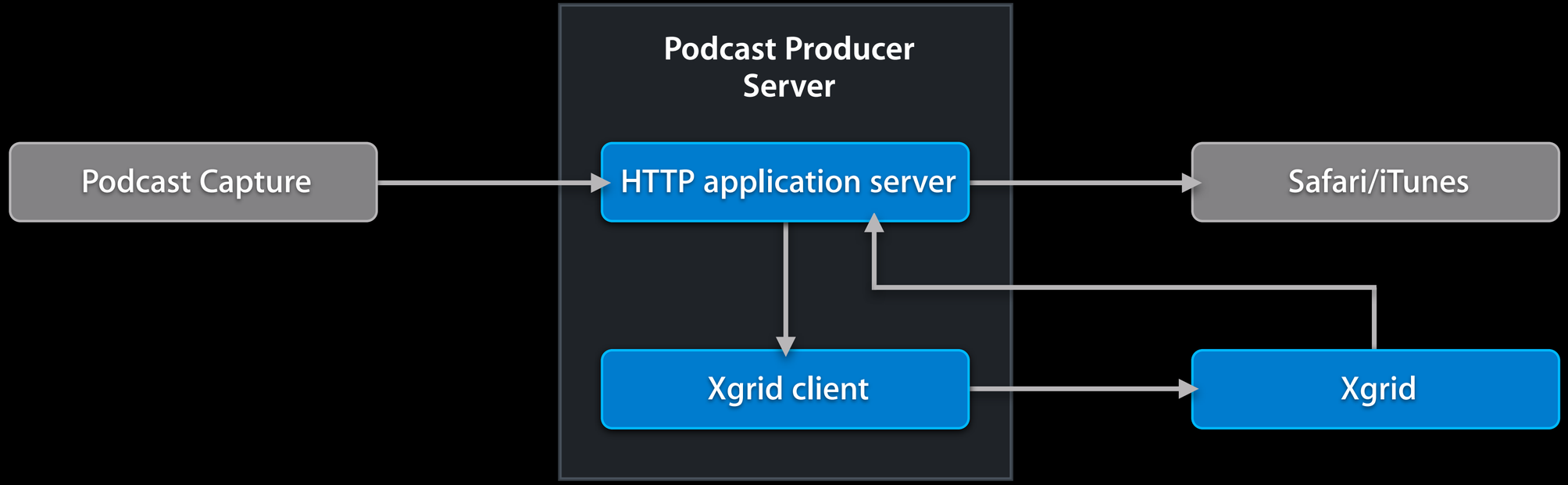
Technology Summary

- Core Animation
  - Blue highlight
  - Dual-source picker
- QTKit capture
  - Device selection
  - Recording
  - Saving

Podcast Producer Server

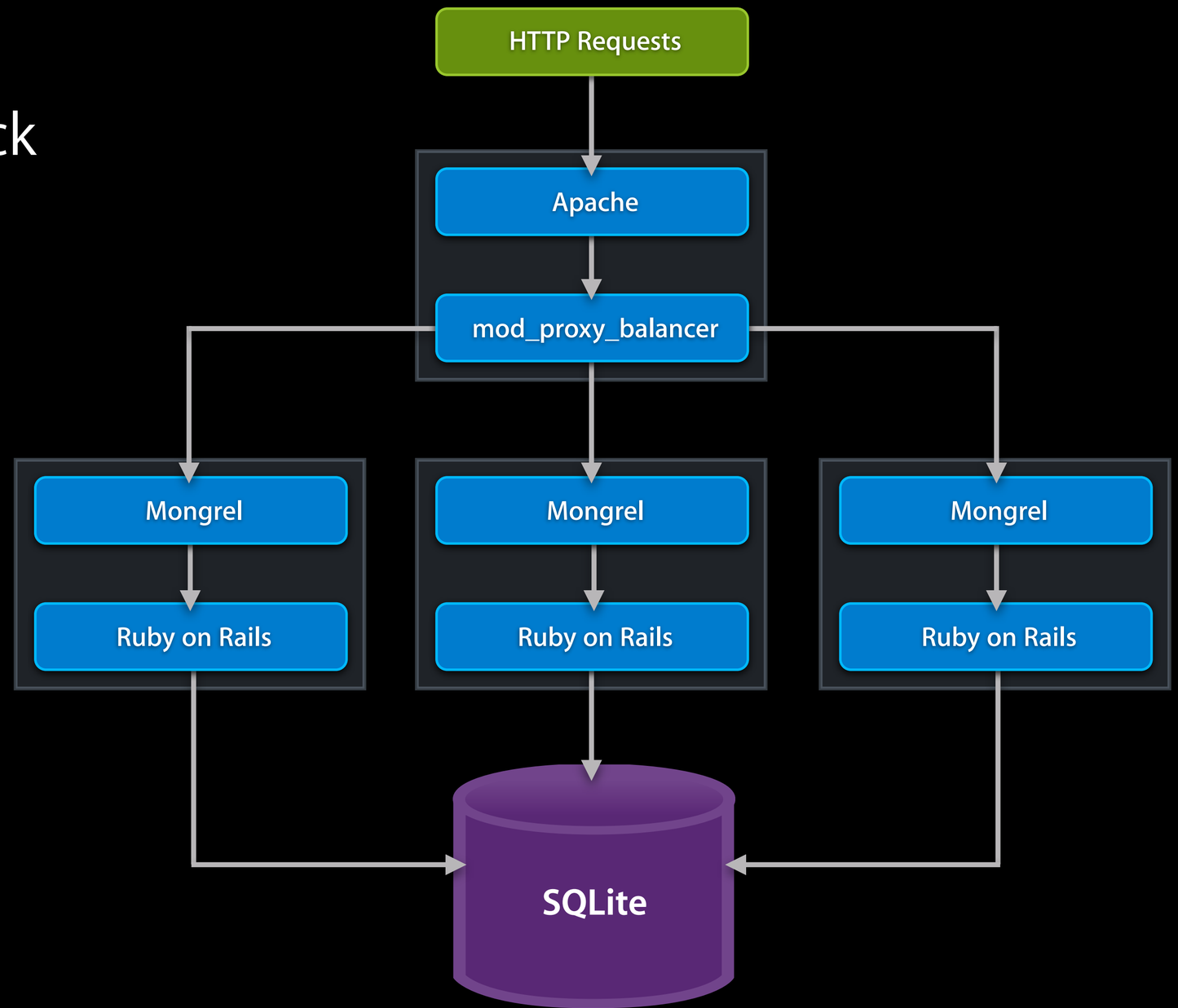
Podcast Producer Server

- HTTP application server
- Xgrid client



HTTP Application Server

- Open source web app stack
  - Apache
  - mod_proxy_balancer
  - Mongrel
  - Ruby on Rails
  - SQLite



Ruby on Rails

- Included with Mac OS X Snow Leopard
- Easy to deploy your web app with Mac OS X Server
- Details are in the Server Admin help

Demo

Ruby on Rails

Xgrid

- General purpose distributed computing system
- Podcast Producer workflows contain Xgrid job templates

Client

Controller

Agents

Demo

Xgrid

Technology Summary

- Ruby on Rails
  - Podcast Capture Web is an HTML-based web application
  - The rest of Podcast Producer Server is an XML-based web service
- Xgrid
  - If you are using Podcast Producer, you have a grid
  - You can debug failed Podcast Producer workflows using Xgrid tools

Podcast Producer Workflows

Podcast Producer Workflows

- Import the source materials into a single video
- Edit the video
  - Titles
  - Transitions
  - Overlays
  - Credits
- Encode the video
- Distribute the video
- Notify about the video

Montage Workflow

- Uses Quick Look technology to convert documents into images
- Uses a Quartz Composer composition to render images into movies
- Uses QTKit encode to flatten and transcode movies into device format

RubyCocoa

- Allows Ruby scripts to use Objective-C APIs
- Most of the core Mac OS X technologies are exposed through Objective-C APIs
- Podcast Producer uses Ruby and RubyCocoa to glue together Mac OS X technologies into a solution

Montage Demo

Demo

Montage

Bibliography

- Core Animation sample code
  http://developer.apple.com
- QTKit Capture sample code
  http://developer.apple.com
- Ruby on Rails deployment documentation
  http://support.apple.com
- Xgrid Administration and High Performance Computing
  http://support.apple.com
- RubyCocoa resources
  http://rubycocoa.com

More Information

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Related Sessions

Mac OS X Server State of the Union	Pacific Heights Monday 5:00PM
What's New for Podcast Producer 2	Russian Hill Tuesday 3:30PM
Podcast Composer In-Depth	Nob Hill Wednesday 5:00PM
Deploying Podcast Producer	Mission Friday 9:00AM
The Technologies That Empower Podcast Producer	Mission Friday 10:30AM

Labs

Podcast Producer Lab	Information Technologies Lab Friday 12:00PM

Summary

- Podcast Producer uses a wide variety of Snow Leopard technologies
- You can use these technologies in your own software
- You can use your knowledge of these technologies to improve how Podcast Producer works for you
  - Debug failed workflows
    - Use Xgrid Admin and the CLI to dig into the details
  - Write your own custom workflows
    - Podcast Producer isn't only about videos, it is a general purpose mechanism for repeatedly applying workflow operations to inputs
  - Write your own Quartz Composer effects
    - Use the compositions within Podcast Composer

Q&A

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